## ABSTRACT

This invention provides a DDR type zeolite membrane, characterized in that it is formed as a membrane on a substrate and its main component is silica, and that each single gas permeance at room temperature and  $100^{\circ}$ C are different, respectively among at least two types of gases selected from a group consisting of carbon dioxide  $(CO_2)$ , hydrogen  $(H_2)$ , oxygen  $(O_2)$ , nitrogen  $(N_2)$ , methane  $(CH_4)$ , normal butane  $(n-C_4H_{10})$ , isobutane  $(i-C_4H_{10})$ , sulfur hexafluoride  $(SF_6)$ , ethane  $(C_2H_6)$ , ethylene  $(C_2H_4)$ , propane  $(C_3H_8)$ , propylene  $(C_3H_6)$ , carbon monoxide (CO), and nitrogen monoxide (NO).